We claim:

1. A system comprising:

a markup language core engine for providing layout and rendering behaviors;

at least one external component designed to provide at least one of a layout behavior and a rendering behavior in addition to the behaviors provided by the core engine; and,

a mechanism included in the core engine to extend the behaviors of the core engine with the behaviors of the at least one external component, such that the behaviors of the at least one external component participate with the behaviors of the core engine.

2. The system of claim 1, wherein each external component has associated therewith at least one pair of interfaces so that the behavior of the external component can participate with the behaviors of the core engine, a first interface of each pair exposed by the external component for querying by the mechanism, and a second interface of each pair exposed by the mechanism for querying by the external component.

3. The system of claim 1, wherein the behaviors provided by one of the at least one external component override comparable behaviors of the core engine.

4. The system of claim 1, wherein the behaviors provided by one of the at least one external component complement comparable behaviors of the core engine.

5. The system of claim 1, wherein the behaviors provided by one of the at least one external component are attached behaviors that can be applied and subsequently removed.

6. The system of claim 1, wherein the behaviors provided by one of the at least one external component are element behaviors that are permanently applied.

7. A method performed by a mechanism for extending a behavior of a core engine with a behavior of an external component, both the core engine behavior and the external component behavior being one of a layout behavior and a rendering behavior, the method comprising:

calling a behavior initialization method of the external component to determine how the behavior of the external component participates with the behavior of the core engine;

calling a behavior method of the external component for the external component to provide the behavior of the external component when the core engine is providing the behavior of the core engine, so that the behavior of the external component participates with the behavior of the core engine; and,

receiving a call to a corresponding behavior method of the mechanism for the external component to communicate with the core engine during participation of the behavior of the external component with the behavior of the core engine.

8. The method of claim 7, wherein the mechanism is part of the core engine.

9. The method of claim 7, wherein the behavior is the layout behavior.

10. The method of claim 9, wherein the behavior is fully delegated to the external component from the core engine, which is specified by the external component in response to calling the behavior initialization method of the external component.

11. The method of claim 9, wherein the behavior implemented by the external component is called after the comparable behavior of the core engine is performed, which is specified by the external component in response to calling the behavior initialization method of the external component.

12. The method of claim 7, wherein the behavior is the rendering behavior.

13. The method of claim 12, wherein rendering by the behavior of the external component replaces rendering by the comparable behavior of the core engine, which is specified by the external component in response to calling the behavior initialization method of the external component.

14. The method of claim 12, wherein rendering by the behavior of the external component intersperses with rendering by the comparable behavior of the core engine, which is specified by the external component in response to calling the behavior initialization method of the external component.

15. The method of claim 7, further initially comprising calling a query method of the external component implementing the behavior.

16. The method of claim 7, wherein the method is performed by execution of a computer program from a computer-readable medium by a processor.

17. A computer-readable medium having stored thereon a data structure representing a pair of interfaces for implementing an extended rendering behavior of an external component that participates in rendering with a rendering behavior of a core engine via a mechanism through the pair of interfaces, the pair of interfaces comprising:

a first interface returned for the extended rendering behavior by the external component for calling by the mechanism, the first interface providing at least a drawing method to request that the external component perform drawing rendering capability, and an initial method to request that the external component specify how the extended rendering behavior participates in rendering with the rendering behavior of the core engine; and,

a second interface exposed by the mechanism for calling by the external component during participation in rendering, the second interface providing at least an invalidate rectangle method to specify that a rectangle rendered by the external component is out-of-date, and an invalidate region method to specify that a non-rectangular region rendered by the external component is out-of-date.

18. The medium of claim 17, wherein the first interface further provides a hit method to indicate that the method needs to perform functionality related to a rectangle rendered by the external component.

19. The medium of claim 17, wherein the second interface further provides a retrieve information method to obtain information requested by the external component in the initial method of the first interface called by the external component.

20. The method of claim 17, wherein the second interface further provides a global-to-local transform method to transform a point from global coordinates to local coordinates, and a transform local-to-global transform method to transform a point from local coordinates to global coordinates.

21. The method of claim 17, wherein the second interface further provides a hit method to determine an identifier of a specific component before the specific component is hit.

22. The method of claim 17, wherein the data structure further represents an additional interface returned for the extended rendering behavior by the external component for calling by the mechanism providing at least an additional initial method to request that the external component specify how the extended rendering behavior participates in rendering with the comparable rendering behavior of the core engine as the rendering relates to events, and an event target method to request that an event fires an element other than an element to which the external component is attached.

23. The method of claim 22, wherein the additional interface further provides a set cursor method to allow the external method to change a cursor, and a string method request the method for a part name that has been hit.

24. The method of claim 17, wherein the data structure further represents an additional interface returned for the extended rendering behavior by the external component for calling by the mechanism providing at least an on move method to allow the external component to update a hardware overlay buffer used by the extended rendering behavior.

25. A machine-readable medium having stored thereon a data structure representing a pair of interfaces for implementing an extended layout behavior of an external component that participates in layout with a comparable layout behavior of a core engine via a mechanism through the pair of interfaces, the pair of interfaces comprising:

a first interface returned for the extended layout behavior by the external component for calling by the mechanism, the first interface providing at least a size method for the external component to specify a default size, a position method for the external component to specify a default position, and an initial method to request that the external component specify how the extended layout behavior participates in layout with the layout behavior of the core engine; and,

a second interface exposed by the mechanism for calling by the external component during participating in layout, the second interface providing at least an invalidate layout method to specify that the extended layout behavior of the external component is to participate in layout with the comparable layout behavior of the core engine differently than previously specified, and an invalidate size method to specify that a layout of the extended layout behavior is out-of-date.

26. The medium of claim 25, wherein the first interface further provides a map size method to expand a layout of the extended layout behavior beyond original borders of the layout.

27. The medium of claim 25, wherein the second interface further provides a resolution method to retrieve a current measuring resolution.

28. A computer-readable medium having one or more computer programs stored thereon for execution by a processor comprising:

a markup language core engine for providing layout and rendering behaviors;

at least one external component designed to provide at least one of a layout behavior and a rendering behavior in addition to the behaviors provided by the core engine; and,

a mechanism included in the core engine to extend the behaviors of the core engine with the behaviors of the at least one external component, such that the behaviors of the at least one external component participate with the behaviors of the core engine.

29. The medium of claim 28, wherein each external component has associated therewith at least one pair of interfaces so that the behavior of the external component can participate with the behaviors of the core engine, a first interface of each pair exposed by the external component for querying by the mechanism, and a second interface of each pair exposed by the mechanism for querying by the external component.